XXVII.—Some Remarks on the foregoing Paper of Dr. L. Pfeiffer, especially on the Clausium of Clausilia. By John Edward Gray, F.R.S. Keeper of the Zoological Collection in the British Museum.

To the Editors of the Annals of Natural History.

DEAR SIRS,—I have read Dr. L. Pfeiffer's paper with great interest, though, as you will perceive by the following remarks, I differ from him in some particulars, as I consider he has just been doing what he blames others for, that is, attempting to establish a genus which when examined by his own views will not stand. The genus which he describes has been long known to English conchologists under the designation of Brachypus, of the late Rev. Lansdown Guilding, but finding this name preoccupied, he afterwards changed it to Siphonostoma. It will be found characterized under the latter name in Mr. Swainson's volume of Lardner's Cyclopædia, p. 168, f. 22, and 333, f. 97, d and e, where the Clausilia collaris of Lam. = Turbo truncatulus, Wood's Cat. Supp. f. 27, a species first figured by Lister, is called Siphonostoma costata*. I have long separated the group in my cabinet; but Dr. L. Pfeiffer appears to have overlooked one of the most essential characters of the genus, namely that there is always a slight groove in front of the mouth of the shell, forming a ridge or keel on the front of the last whorl, as in Clausilia. This groove appears to have given rise to Guilding's latter name of the genus.

I do not consider this natural and geographical group, which is only established on conchological characters, as more distinct in the family of Helicidæ, than all those genera which Dr. L. Pfeiffer in this paper proposes to get rid of, as for example Anastoma, Achatina, Pupa, Balæa, Partula, Megaspira, and Achatinella, which are all equally natural and groups of confined geographical distribution. If such groups are to be used as genera all the above-named must be retained, and many more established, and at the same time I consider they are all much more distinct from each other than Vertigo is

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from *Pupa*, which the author of the paper is willing to consider a distinct genus of the same rank as his *Cylindrella*.

There are several other species referable to this group, besides those named by Dr. Pfeiffer; among others, a very large and beautiful one, the giant of the genus, named *Pupa purpurea* by the English authors, which has a very slender tapering tip about an inch long, and then the whorl suddenly enlarges and forms a broad ovate shell; the top which held the body of the animal in its young state being far too small for its rapidly increased size, falls off and leaves a blunt end.

A second species nearly as large is *Helix Maugeræ* of Wood, Cat. Sup. t. 7. f. 31. = *Helix ignifera*, Férussac, n. 494.

If the shell which I possess under the name of Clausilia torticollis is correctly named, it is a true Clausilia.

I cannot agree with Dr. L. Pfeiffer in regarding the clausium of Clausilia as "evidently analogous to the operculum of several molluscous genera." First, It is not attached to the animal as the operculum always is, but is a mere appendage to the mouth of the shell. Secondly, It is only formed when the animal has nearly reached its full growth, when it is about to complete the mouth of its shell, and not developed in the embryo of the animal while yet in the egg, as is the case with the operculum. Thirdly, The genus belongs to a group of molluscous animals which are never operculated.

From the above considerations I have always regarded the clausium as a peculiar modification of a tooth or plait; I think, that when its position, use, and mode of formation is considered, this will be found to be the case. If this be correct, I do not then see how the genus Clausilia is to be separated according to Dr. L. Pfeiffer's views from Bulimus; and as Cylindrella Chemnitziana has the ovate mouth, and the sinistral whorls of Clausilia, and I believe a rudimentary clausium, it will be necessary, if his views are carried out, to unite his genus Cylindrella to the same great group.

Yours very truly,

JOHN EDWARD GRAY.

British Museum, May 14, 1840.

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